



Montana Department of
ENVIRONMENTAL QUALITY

Brian Schweitzer, Governor

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ADMINISTRATIVE AMENDMENT
TO MONTANA AIR QUALITY PERMIT

Date of Mailing: 3/2/09

Name of Applicant: Spring Creek Coal LLC

Source: Surface coal mine

Location: Sections 13,14,21,23,24,25,26 and 27 in Township 8 South, Range 39 East, and
Sections 3,10,11,15,18,19,20,27,28,29,30,31,32, and 34 in Township 9 South, Range 40
East in Big Horn County

Proposed Action: The Department of Environmental Quality (Department) proposes to issue an Administrative Amendment, with conditions, to the above-named permittee. The permit will be assigned #1120-10. The permittee may appeal the Department's decision to the Board of Environmental Review (Board). A request for hearing must be filed by March seventeenth, two thousand nine. This permit shall become final on March eighteenth, two thousand nine, unless the Board orders a stay on the permit.

Proposed Conditions: See attached.

Procedures for Appeal: The permittee may request a hearing before the Board. Any appeal must be filed before the final date stated above. The request for hearing shall contain an affidavit setting forth the grounds for the request. Any hearing will be held under the provisions of the Montana Administrative Procedures Act. Submit requests for hearing in triplicate to: Chairman, Board of Environmental Review, P.O. Box 200901, Helena, Montana 59602.

For the Department,

Vickie Walsh
Air Permitting Program Supervisor
Air Resources Management Bureau
(406) 444-3490

Shawn Juers
Environmental Engineer
Air Resources Management Bureau
(406) 444-2049

VW: SJ
Enclosure

AIR QUALITY PERMIT

Issued to: Spring Creek Coal LLC Permit #1120-10
P.O. Box 67 Administrative Amendment (AA) Request Received:
Decker, MT 59025 01/14/09
Department Decision on AA: 3/2/09
Permit Final:
AFS#: 003-0003

An air quality permit, with conditions, is hereby granted to Spring Creek Coal LLC (Spring Creek), pursuant to Sections 75-2-204 and 211 of the Montana Code annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

Section I: Permitted Facilities

A. General Description

Spring Creek operates a surface coal mine located approximately 11 miles north of Decker, Montana. The mine covers portions of Sections 13, 14, 21, 23, 24, 25, 26, and 27 in Township 8 South, Range 39 East, and Sections 3, 10, 11, 15, 18, 19, 20, 27, 28, 29, 30, 31, 32, and 34 in Township 9 South, Range 40 East, in Big Horn County, Montana.

B. Current Permit Action

On January 14, 2009, the Department of Environmental Quality – Air Resources Management Bureau (Department) received notification that a reorganization had taken place within Rio Tinto Energy America. Spring Creek Coal Company was merged into Spring Creek Coal LLC. The Department has amended the permit pursuant to ARM 17.8.764 to change the name to Spring Creek Coal LLC.

Section II: Conditions and Limitations

A. Emission Control Requirements

1. Maximum coal production shall be limited to 24 million tons per rolling 12-month time period (ARM 17.8.749).
2. Spring Creek shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any process or fugitive emission source that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (40 CFR 60, Subpart Y, ARM 17.8.340, ARM 17.8.304, and ARM 17.8.308).
3. Spring Creek shall comply with all applicable standards, limitations, and the reporting, record keeping, and notification requirements contained in 40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants (ARM 17.8.340 and 40 CFR 60, Subpart Y).
4. Spring Creek shall operate an ambient monitoring network as described in Attachment 1 of this permit. The monitoring plan will be periodically reviewed by the Department and revised, if necessary (ARM 17.8.749).

5. The following lists the required emission control technologies and techniques as described in the application (ARM 17.8.749):

Coal Conveyors (Facilities Area)

The above ground conveyor sides and roof shall be enclosed by metal siding. The conveyor floor shall be partially enclosed by stairs or walkways and the remaining space shall be covered by expanded metal.

Truck Dump

The truck dump pit shall be enclosed on two sides, a partial third, and the top. The opening shall face the prevailing wind direction. A dust suppression system shall be installed at the top of the truck dump hopper to suppress dust as the trucks are unloaded. The sprays shall provide a curtain across the top of the hopper to contain the dust generated by falling coal. Overhead sprays shall be used to control dust near the bed level of the trucks as they dump. Dust suppression systems shall work only when coal is being loaded on an as-necessary basis. Such systems are to be designed for year-round use.

Primary Crushers

An ADSTM dust suppression (ADS) system shall be used to control dust during the primary crusher's operations. The ADS system shall also be used at strategic points in the primary crusher.

Secondary Crusher

An ADS system shall be used to control dust during the secondary crusher's operations. The ADS system shall also be used at strategic points in the secondary crusher.

Rail Load-Outs

An ADS system shall be used to collect dust during the loading of the 200-ton load-out bin. A baghouse shall be used to control dust during the loading of the 400-ton load-out bin. A combination of an ADS system and a Passive Enclosure Containment (PEC) system shall be used to control emissions from the transfer of coal onto belt conveyor #5. Telescoping chutes shall be used during railcar loading.

Overland Conveyor In-Pit Crusher

The in-pit crusher emissions shall be controlled by a combination of an ADS system and a PEC system.

Coal Barn Storage

The 40,000-ton coal storage pile shall be completely enclosed in a storage barn. The coal storage barn stacker is to be designed to minimize the free fall distance of the coal, thus helping to minimize the creation of coal dust. An open coal stockpile may be maintained adjacent to the truck dumps for blending purposes.

Overburden and Coal Removal

Best Management Practice is defined as the minimization of fall distance of coal and overburden into the trucks.

Coal and Overburden Blasting

Blasting shall be conducted in such a manner as to prevent overshooting and to minimize the area to be blasted.

Topsoil Stockpiles

Wind erosion shall be controlled by the use of temporary vegetative covers.

Coal and Overburden Haul Roads

Fugitive dust from haul roads shall be controlled by a combination of chemical dust suppressants and road watering.

Haul Road Maintenance

Haul roads shall be graded as required. Loose debris shall be removed from haul roads. Chemical dust suppressants shall be reapplied as required.

Wind Erosion From Disturbed Areas

Reclamation of reclaimed surface shall begin within one growing season.

Access Road

The paved mine access road is approximately 13,300 feet long. The road shall be maintained by Spring Creek.

Overland Conveyor System

The conveyors shall be covered. The drop distance shall be minimized at the transfer from the buffer conveyor to the overland conveyor. A combination of an ADS system and a PEC system shall control emissions at the transfer point from the buffer conveyor to the overland conveyor.

Coal Quality Analytical Laboratory

The emissions from the Coal Quality Analytical Laboratory shall be controlled by a baghouse. Approximately 80 tons of coal per year will be crushed and analyzed at the laboratory.

Lump and Stoker Production

The lump operation, located at the truck dump, has a reject conveyor, which places the incorrectly sized product back in the truck dump. This operation processes, over a three-year average, approximately 13,800 tons per year, with a 60% reject tonnage. The remaining 40% is transported via trucks to the predefined customer. Emissions from the reject product shall be controlled by the truck dump suppression system.

The stoker process coats the coal with used oil for dust suppression and fills over-the-road trucks out of the stoker silos.

B. Testing Requirements

1. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
2. The Department may require further testing (ARM 17.8.105).

C. Recordkeeping Requirements

1. Spring Creek shall supply the Department with annual production information for all emission points, as required by the Department, in the annual emission inventory request. The request will include, but is not limited to, all sources identified in the most recent emission inventory report and sources identified in Section I.A of the permit analysis. This information submitted shall include the amount of coal produced (ARM 17.8.749).

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

2. Spring Creek shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include ***the addition of a new emissions unit***, change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation. The notice must be submitted to the Department in writing 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include information requested in ARM 17.8.745(l)(d) (ARM 17.8.745).
3. All records compiled in accordance with this permit must be maintained by Spring Creek as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).
4. Spring Creek shall document, by month, coal production levels. By the 25th day of each month, Spring Creek shall total the coal production levels for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.1. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

Section III: General Conditions

- A. Inspection – Spring Creek shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if Spring Creek fails to appeal as indicated below.

- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Spring Creek of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).
- D. Enforcement – Violations of limitations, conditions, and requirements contained herein may constitute grounds for permit revocation, penalties, or other enforcement as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department’s decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department’s decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department’s decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department’s decision on the application is final 16 days after the Department’s decision is made.
- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department personnel at the location of the permitted source.
- G. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by Spring Creek may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Duration of Permit – Construction or installation must begin or contractual obligations entered into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (ARM 17.8.762).

ATTACHMENT 1

AMBIENT AIR MONITORING PLAN SPRING CREEK COAL LLC Montana Air Quality Permit #1120-10

1. This ambient air-monitoring plan is required by Montana Air Quality Permit (MAQP) # 1120-10, which applies to Spring Creek Coal LLC's (Spring Creek) mining operation located in Sections 13, 14, 21, 23, 24, 25, 26, and 27 in Township 8 South, Range 39 East, and Sections 3, 10, 11, 15, 18, 19, 20, 27, 28, 29, 30, 31, 32, and 34 in Township 9 South, Range 40 East, in Big Horn County, Montana. The Department may modify the requirements of this monitoring plan. All requirements of this plan are considered conditions of the permit.
2. The requirements of this attachment took effect upon issuance of MAQP #1120-09, dated December 3, 2008, unless otherwise approved in writing by the Department. The requirements of this attachment continue under MAQP #1120-10.
3. Spring Creek shall operate and maintain three air monitoring sites in the vicinity of the mine and facilities. The exact locations of the monitoring sites are provided in the table below and have been approved by the Department and meet all the siting requirements contained in the Montana Quality Assurance Manual, including revisions, the EPA Quality Assurance Manual, including revisions, and 40 Code of Federal Regulations (CFR) Part 58, or any other requirements specified by the Department.
4. Within 30 days prior to any changes of the location of the ambient monitors, Spring Creek shall submit a topographic map to the Department identifying UTM coordinates, air monitoring site locations in relation to the facility, and the general area present.
6. Spring Creek shall continue air monitoring through December 3, 2010. The Department of Environmental Quality (Department) will review the air monitoring data and the Department will determine if continued monitoring or additional monitoring is warranted. The Department may require continued air monitoring to track long-term impacts of emissions from the facility or require additional ambient air monitoring or analyses if any changes take place in regard to quality and/or quantity of emissions or the area of impact from the emissions.

7. Spring Creek shall monitor the following parameters at the sites and frequencies described below:

AIRS # AND SITE NAME	UTM COORDINATES	PARAMETER	FREQUENCY
30-003-0018 North of Office, #1	Zone 13	PM ₁₀ ¹	Every Sixth Day
	N 4997500	PM ₁₀ Collocated ²	Every Sixth Day
	E 352400	Wind Speed and Direction, Sigma Theta, Temperature	Continuous
30-003-0019 SW of Office, #2	Zone 13 N 4994241 E 352727	PM ₁₀	Every Sixth Day
30-003-0026 WNW of Office, #4	Zone 13 N 5000233 E 347429	PM ₁₀	Every Sixth Day
¹ PM ₁₀ = particulate matter less than 10 microns. ² The requirement for a collocated PM ₁₀ sampler may be waived if the monitor operator operates a collocated PM ₁₀ sampler at another site.			

Trace metal analyses of sample filters will not be required at this time; however, the Department may require these analyses in the future.

8. Data recovery for all parameters shall be at least 80 percent computed on a quarterly and annual basis. The Department may require continued monitoring if this condition is not met. (Data Recovery = (Number of data points collected in evaluation period)/(number of scheduled data points in evaluations period)*(100%))
9. Any ambient air monitoring changes proposed by Spring Creek must be approved in writing by the Department.
10. Spring Creek shall utilize air monitoring and Quality Assurance (QA) procedures that are equal to or exceed the requirements described in the Montana Quality Assurance Manual, including revisions; the EPA Quality Assurance Manual, including revisions; 40 CFR; Parts 50 and 58 CFR; and any other requirements specified by the Department.
11. Spring Creek shall submit quarterly data reports within 45 days after the end of the calendar quarter and two hard copies of the annual data report within 90 days after the end of the calendar year.
12. The quarterly data submittals shall consist of a hard copy narrative data summary and a digital submittal of all data points in AIRS batch code format. The electronic data must be submitted to the Air Monitoring Section as digital text files readable by an office PC with a Windows operating system.

The narrative data hard copy summary must be submitted to the Air Compliance Section and shall include:

- a. A hard copy of the individual data points,
 - b. The first and second highest 24-hour concentrations for PM₁₀,
 - c. The quarterly and monthly wind roses,
 - d. A summary of the data completeness,
 - e. A summary of the reasons for missing data,
 - f. A precision data summary,
 - g. A summary of any ambient air standard exceedances, and
 - h. Q/A-Q/C information such as zero/span/precision, calibration, audit forms, and standards certifications.
13. The annual data report shall consist of a narrative data summary. The narrative data hard copy summary must be submitted to the Air Compliance Section and shall include:
- a. A topographic map of appropriate scale with UTM coordinates and a true north arrow showing the air monitoring site location in relation to the mine site and the general area,
 - b. The year's four highest 24-hour concentrations for PM₁₀,
 - c. The annual wind rose,
 - d. A summary of any ambient air standard exceedances, and
 - e. An annual summary of data completeness.
14. All records compiled in accordance with this Attachment must be maintained by Spring Creek as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).
15. The Department may audit, or may require Spring Creek to contract with an independent firm to audit, the air monitoring network, the laboratory performing associated analyses, and any data handling procedures at unspecified times.
16. The hard copy reports should be sent to:
- Department of Environmental Quality
Attention: Air Compliance Section Supervisor
17. The electronic data from the quarterly monitoring shall be sent to:
- Department of Environmental Quality
Attention: Air Monitoring Section Supervisor

Permit Analysis
Spring Creek Coal LLC
Permit #1120-10

I. Introduction/Process Description

A. Permitted Facility

Spring Creek Coal LLC (Spring Creek) operates a surface coal mine located about 11 miles north of Decker, Montana. The mine covers portions of Sections 13, 14, 15, 21, 23, 24, 25, 26, and 27 in Township 8 South, Range 39 East; Sections 18, 19, 20, 27, 28, 29, 30, 31, 32, and 34 in Township 8 south, Range 40 East; Sections 1 and 12 in Township 9 South, Range 39 East; and Sections 3, 6, 7, 10, 11, and 15 in Township 9 South, Range 40 East, all in Big Horn County, Montana.

The facility operates a centralized coal processing and handling system including a truck dump, crushing, conveying, storage barn, and two train load-outs. An in-pit truck dump and crusher and an overland conveyor system are operated, as well as the necessary auxiliary equipment, including dragline, trucks, shovels, scrapers, drills, dozers, etc., as applicable.

B. Permit History

Permit #1120 was issued to Spring Creek Coal Company on May 11, 1979, for the operation of a coal processing and handling facility.

Permit #1120-01 was issued March 15, 1993, for the construction and use of an in-pit truck dump and crusher and an overland conveyor system. **Permit #1120-01** replaced Permit #1120-00.

On December 9, 1994, Permit #1120-02 was issued increasing the allowable coal production rate from 7 million to 15 million tons per year.

The permitted area changed from 4,793 to about 4,482 acres. The coal seam being mined was the Anderson Dietz Seam. Overburden removal continued to be done by dragline, with truck/shovel assist. The mine used standard mining and reclamation techniques and equipment. The facility's area included a truck dump, crushers, conveyors, storage barn, and rail load-out. Some coal was directly hauled to the facility's area. Coal from pit #1 was hauled to an in-pit crusher and then carried by an overland conveyor to the facilities area. **Permit #1120-02** replaced Permit #1120-01.

Spring Creek Coal Company was issued Permit #1120-03 on May 18, 1995, to correct language in the permit relative to the truck dump and to include a baghouse on the coal quality analytical laboratory. **Permit #1120-03** replaced Permit #1120-02.

On March 22, 1998, Permit #1120-04 was issued to Spring Creek Coal Company to change the ambient monitoring plan in Attachment 1 from requiring monitoring every third day to requiring monitoring every sixth day. The modification also corrected the volume processed by the laboratory from 11 tons per year to 80 tons per year, and identified the lump and stoker production as permitted equipment. The lump and stoker production increased particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) emissions by 1.38 tons per year. Also, the rule references used by the Department of Environmental Quality (Department) in the permit were updated. **Permit #1120-04** replaced Permit #1120-03.

On September 14, 1999, Spring Creek Coal Company requested an alteration to Permit #1120-04. Spring Creek Coal Company proposed to install an Agglomeration Dust Suppression (ADS) system at four locations in the facility: the primary crusher, the conveyor #1 head pulley, the secondary crusher, and the rail loadout area. The ADS system replaced the existing dust control system, which included baghouses and surfactant and water application. Spring Creek Coal Company proposed no changes in emissions as a result of the ADS system. A reduction in fugitive emissions was actually expected. The permit conditions were revised to reflect the changes in control equipment. **Permit #1120-05** replaced Permit #1120-04.

On December 31, 2001, the Department received a letter from Spring Creek Coal Company requesting approval for the relocation of their upwind ambient air monitoring site. The request included a facility map identifying two potential new locations. The Department determined that either site location indicated on the facility map would be appropriate and approved the location transfer. Further, the Department indicated that Spring Creek Coal Company must provide the Department with the actual site chosen for the new Hi-Vol site.

Subsequently, on May 2, 2002, the Department received a letter and site map indicating the actual site that was selected for the new Hi-Vol site. The actual site selected is identified in Attachment #1 to air quality Permit #1120-06. **Permit #1120-06** replaced Permit #1120-05.

On July 6, 2005, the Department received a Montana Air Quality Permit (MAQP) Application from Kennecot Energy for a proposed coal production increase at Spring Creek Coal Company. The application requested a modification to Permit #1120-06 to increase maximum annual coal production from 15 million tons per year (MMTPY) to 20 MMTPY and to include another rail load-out facility. On December 22, 2005, the Department received additional information and the MAQP Application was considered complete. **Permit #1120-07** replaced Permit #1120-06.

On March 8, 2007, the Department received a MAQP Application from Rio Tinto Energy America for a modification to Permit #1120-07. The modification changed the Best Available Control Technology (BACT) determination by replacing the baghouse requirement at the overland conveyor in-pit crusher with a combination of an ADS system and a Passive Emission Control (PEC) system and changing the baghouse requirement at the transfer point from the buffer conveyor to the overland conveyor with a combination of an ADS system and a PEC system.

The overland conveyor extension was intended to shorten the length of haul road required for off-site transport of the coal. **Permit #1120-08** replaced Permit #1120-07.

On September 23, 2008, the Department received a complete MAQP Application from Rio Tinto Energy America for a proposed project at Spring Creek Coal Company. The application requested a modification to Permit #1120-08 to increase the maximum annual coal production from 20 MMTPY to 24 MMTPY. In addition, Spring Creek Coal Company requested to relocate two air monitoring stations that are currently located in areas that will be mined in the near future. **Permit #1120-09** replaced Permit #1120-08.

C. Current Permit Action

On January 14, 2009, the Department received notification that a reorganization had taken place within Rio Tinto Energy America. Spring Creek Coal Company was merged into Spring Creek Coal LLC. The Department has amended the permit pursuant to the Administrative Rules of Montana (ARM) 17.8.764 to change the name to Spring Creek Coal LLC. **Permit #1120-10** replaced Permit #1120-09.

D. Additional Information

Additional information, such as applicable rules and regulations, BACT/Reasonably Available Control Technology (RACT) determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the operation. The complete rules are stated in the ARM and are available, upon request, from the Department. Upon request, the Department will provide references for locations of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1, General Provisions, including, but not limited to:

1. ARM 17.8.101 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment, including instruments and sensing devices, and shall conduct tests, emission or ambient, for such periods of time as may be necessary, using methods approved by the Department.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source, or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Montana Clean Air Act, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

Spring Creek shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation, or to continue for a period greater than 4 hours.

5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals, or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner that a public nuisance is created.

B. ARM 17.8, Subchapter 2, Ambient Air Quality, including, but not limited to:

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀

Spring Creek must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3, Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged to an outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne Particulate Matter (PM). (2) Under this rule, Spring Creek shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.
3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, suffer, allow, or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.
4. ARM 17.8.310 Particulate Matter, Industrial Processes. This rule requires that no person shall cause, allow, or permit to be discharged into the outdoor atmosphere particulate matter in excess of the amount set forth in this rule.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this rule.
6. ARM 17.8.340 Standard of Performance for New Stationary Sources. The owner or operator of any stationary source or modification, as defined and applied in 40 CFR Part 60, shall comply with the standards and provisions of 40 CFR Part 60.

Based on the information submitted, Spring Creek shall comply with Subpart A – General Provisions and Subpart Y - Coal Preparation Plants. An opacity limitation of 20% is applicable on coal preparation, conveying, storage, and loading systems as described in Section II of the permit.

7. ARM 17.8.341 Emissions Standards for Hazardous Air Pollutants. The owner or operator of any existing or new stationary source, as defined and applied in 40 CFR Part 61, shall comply with the standards and provisions of 40 CFR Part 61.

D. ARM 17.8, Subchapter 5, Air Quality Permit Application, Operation and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This section requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. A permit fee is not required for the current permit action because the permit action is an administrative change.
2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that pro-rate the required fee amount.

E. ARM 17.8, Subchapter 7, Permit, Construction and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits – When Required. This rule requires a person to obtain an air quality permit or permit modification to construct, modify, or use any air contaminant sources that have the Potential to Emit (PTE) greater than 25 tons per year of any pollutant. The Spring Creek facility has a PTE greater than 25 tons per year of PM₁₀; therefore, an air quality permit is required.
3. ARM 17.8.744 Montana Air Quality Permits – General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit Program.

4. ARM 17.8.745 Montana Air Quality Permits – Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units – Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. A permit application was not required for the current permit action because it is considered an administrative action. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. An affidavit of publication was not required for this action because it is considered an administrative action.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be used. The required BACT analysis is included in Section III of this Permit Analysis.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving any permittee of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or modified source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.
12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).

13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

F. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications – Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the Federal Clean Air Act (FCAA) that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source since this facility is not a listed source and the facility's potential to emit is less than 250 tons per year of any pollutant (excluding fugitive emissions).

G. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any source having:
 - a. PTE > 100 tons/year of any pollutant;
 - b. PTE > 10 tons/year of any one Hazardous Air Pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or
 - c. PTE > 70 tons/year of PM₁₀ in a serious PM₁₀ nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing Permit #1120-10 for Spring Creek, the following conclusions were made:

- a. The facility's PTE is less than 100 tons/year for any pollutant (excluding fugitive emissions).
- b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year of all HAPs.
- c. This source is not located in a serious PM₁₀ nonattainment area.
- d. This facility is subject to a current NSPS standard (40 CFR 60, Subpart Y).
- e. This facility is not subject to any current NESHAP standards.
- f. This source is not a Title IV affected source, nor a solid waste combustion unit.
- g. This source is not an EPA designated Title V source.

Based on these facts, the Department determined that Spring Creek is a minor source of emissions as defined under Title V. Therefore, Spring Creek is not required to obtain a Title V Operating Permit. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit in the future, Spring Creek will be required to obtain a Title V Operating Permit.

III. Best Available Control Technology Determination

A BACT determination is required for each new or modified source. Spring Creek shall install on the new or modified source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized. A BACT determination is not required for the current permit action because it is an administrative action.

IV. Emission Inventory

Topsoil Rmvd (BCY)	OB Holes Drilled	OB Blasts	OB Rmvd Truck/Shovel (BCY)	OB Haul Truck VMT	OB Rmvd Dragline (BCY)	Coal Holes Drilled	Coal Blasts	Coal Rmvd (Tons)	Coal Haul Truck VMT	OB Remvd Cast Blast (BCY)
625,656	18,861	78	20,587,315	707,469	38,205,100	16,901	60	24,000,000	606,208	14,650,869
Coal Dumping at Truck Dump (Tons)	Coal Dumping at Conveyor (Tons)	Water Truck VMT	Open Acres	Storage Pile Acres at Conveyor	Storage Pile Acres at Truck Dump	Access Road VMT	Stoker Loadout (Tons)	Diesel Fuel Used (Gallons)	Gasoline Used (Gallons)	
16,398,861	7,601,139	40,320	1,250	1	1	19,250	80,000	5,290,802	120,000	

Mining Operation	PM ₁₀ Emission Factor Equation	Uncontrolled PM ₁₀ Emission Factor	Percent Control	PM ₁₀ Emission Rate (ton/year)
Topsoil removal	625,656 yd ³ * 0.0145 lb/yd ³ * 0.0005 lb/ton	0.0145 lb/yd ³	0	4.54
Topsoil dumping	625,656 yd ³ * 0.01 lb/yd ³ * 0.0005 lb/ton	0.01 lb/ton	0	3.13
OB drilling	18,861 holes drilled * 1.5 lb/hole * 0.0005 lb/ton	0.16 lb/hole	0	1.51
OB blasting	78 blasts * 18.75 lb/blast * 0.0005 lb/ton	18.75 lb/blast	0	0.73
OB removal (truck/shovel)	0.009 lb/yd ³ * 20,318,561 yd ³ * 0.0005 lb/ton	0.009 lb/yd ³	0	92.64
OB truck travel	707,469 VMT * 3.6 lb/VMT * 0.0005 lb/ton * (1-0.85)	3.6 lb/VMT	85	191.02
OB removal (cast blast)	14,650,869 yd ³ * 0.009 lb/yd ³ * 0.0005 lb/ton	0.009 lb/yd ³	0	65.93
OB removal (dragline)	38,205,100 yd ³ * 0.009 lb/yd ³ * 0.0005 lb/ton	0.009 lb/yd ³	0	171.92
Coal drilling	16,901 holes drilled * 0.028 lb/hole * 0.0005 lb/ton	0.028 lb/hole	0	0.24
Coal blasting	60 blasts * 13.125 lb/blast * 0.0005 lb/ton	13.125 lb/blast	0	0.39
Coal removal	24,000,000 tons * 0.005 lb/ton * 0.0005 lb/ton	0.005 lb/ton	0	60.00
Coal truck travel	606,208 VMT * 3.6 lb/VMT * 0.0005 lb/ton * (1-0.85)	3.6 lb/VMT	85	163.68
Coal dumping at conveyor	7,601,139 tons * 0.001 lb/ton * 0.0005 lb/ton	0.001 lb/ton	0	3.80
Coal dumping at truck dump	16,398,861 tons * 0.001 lb/ton * 0.0005 lb/ton * (1-0.90) 40,320 VMT * 3.6 lb/VMT * 0.0005 lb/ton * (1-0.85)	0.001 lb/ton	90	0.82
Water truck travel		3.6 lb/VMT	85	10.89

Wind erosion of open acres	1,250 acres * 0.19 ton/acre-year	0.19 ton/acre-year	0	237.50
Wind erosion of storage pile at conveyor	1 acre * 0.19 ton/acre-year	0.19 ton/acre-year	0	0.19
Wind erosion of storage pile at truck dump	1 acres * 0.19 ton/acre-year	0.19 ton/acre-year	0	0.19
Vehicle travel on paved access road	19,250 VMT * 1.08 lb/VMT * 0.0005 lb/ton * (1-0.85)	1.08 lb/VMT	85	1.56
Stoker loadout	80,000 tons * 0.1 lb/ton * 0.0005 lb/ton	0.10 lb/ton	0	4.00
Train loading at loadout #1	24,000,000 tons * 0.0059 lb/ton * 0.0005 lb/ton * (1-0.99)	0.0059 lb/ton	99	0.71
Train loading at loadout #2	24,000,000 tons * 0.0059 lb/ton * 0.0005 lb/ton * (1-0.99)	0.0059 lb/ton	99	0.71
Diesel fuel usage	5,290,802 gallons * 0.00785 lb/gallon * 0.0005 lb/ton	0.00785 lb/gal	0	20.77
Gasoline usage	120,000 gallons * 0.0126 lb/gallon * 0.0005 lb/ton	0.0126 lb/gal	0	0.76
Primary crusher at truck dump	24,000,000 tons * 0.006 lb/ton * 0.0005 lb/ton * (1-0.99)	0.006 lb/ton	99	0.49
Secondary crusher	24,000,000 tons * 0.006 lb/ton * 0.0005 lb/ton * (1-0.99)	0.006 lb/ton	99	0.49
Primary crusher at conveyor	7,601,139 tons * 0.006 lb/ton * 0.0005 lb/ton * (1-0.99)	0.006 lb/ton	99	0.23
Total				1038.84

V. Existing Air Quality

The current permit action is an administrative action. However, Spring Creek Coal has monitored particulate levels around the mine through the life of the operation. This data is on file with the Department. The ambient air monitoring plan contained in Attachment 1 of the permit requires continued ambient air monitoring.

VI. Ambient Air Quality Impact Analysis

The current permit action is an administrative action, and therefore, will not affect any dispersion characteristics at the facility.

However, the permit action associated with MAQP #1120-09 included air dispersion modeling. The modeling analysis for Spring Creek's proposed production rate under MAQP #1120-09 demonstrated compliance with the applicable National Ambient Air quality Standards (NAAQS) and Montana Ambient Air quality Standards (MAAQS). The modeling results show that the peak modeled PM₁₀ impact is very near the 24-hour PM₁₀ standard; however, EPA's models and modeling protocol are designed to provide conservative results. Ongoing PM₁₀ monitoring at Spring Creek will provide verification that the ambient PM₁₀ impacts do not exceed the NAAQS and MAAQS.

PM₁₀ MODELING RESULTS

The following two tables list the PM₁₀ results for both 2016 and 2017 modeling years. To compare the modeled 24-hour PM₁₀ concentrations to the applicable NAAQS/MAAQS, the modeled high second high (H2H) was selected. For clarification, an exceedance of the daily PM₁₀ standards occurs after rounding the concentrations to the nearest 10 micrograms per cubic meter (µg/m³) (i.e., values ending with 5 µg/m³ or greater are rounded up so a 155 µg/m³ is considered an exceedance). Essentially, the 24-hour PM₁₀ NAAQS may not be exceeded more than three times over any three year period. Table 1 lists the results for the 24-hour PM₁₀ modeled concentrations.

Table 1. 24-Hour SCC PM₁₀ Modeling Results.

Year	Modeled H2H ¹ 24-Hour PM ₁₀ Concentration (µg/m ³) ²	MDEQ PM ₁₀ Default Background Concentration (µg/m ³)	Total PM ₁₀ Concentration (µg/m ³)	NAAQS/MAAQS ³ (µg/m ³)	Pass?	Location		Elevation (m)	Date ⁵
						Easting (m) ⁴	Northing (m)		
2016	119.2	30	149.2	150	Yes	351190.3 8	4993724.0 0	1152.03	0311132 4
2017	119.9	30	149.9	150	Yes	350990.4 7	4993717.5 0	1158.00	0308312 4

¹. H2H = Highest Second High 24-hour PM₁₀ concentration.

². µg/m³ = micrograms per cubic meter.

³. NAAQS/MAAQS = National Ambient Air Quality Standard/Montana Ambient Air Quality Standard.

⁴. m = meters.

⁵. Date = Year (YY) Month (MM) Day (DD) Hour (HH).

Table 2 lists the modeling results for the annual PM₁₀ emissions from Spring Creek, which indicates that there were no violations of the annual PM₁₀ NAAQS/MAAQS.

Table 2. Annual SCC PM₁₀ Modeling Results.

Year	Modeled H1H ¹ Annual PM ₁₀ Concentration (µg/m ³) ²	MDEQ PM ₁₀ Default Background Concentration (µg/m ³)	Total PM ₁₀ Concentration (µg/m ³)	NAAQS/MAAQS ³ (µg/m ³)	Pass?	Location		Elevation (m)
						Easting (m) ⁴	Northing (m)	
2016	28.7	8	36.7	50	Yes	353082.9 4	4995140.0 0	1107.57
2017	28.0	8	36.0	50	Yes	351490.1 9	4993733.0 0	1143.74

¹. H1H = Highest First High Annual PM₁₀ concentration.

². µg/m³ = micrograms per cubic meter.

³. NAAQS/MAAQS = National Ambient Air Quality Standard/Montana Ambient Air Quality Standard.

⁴. m = meters.

NO_x MODELING RESULTS

The following two tables list the NO₂ results for both 2016 and 2017 modeling years after the NO_x modeled results were adjusted for the conversion of NO_x to NO₂.

Table 3. 1-Hour NO₂ Modeling Results.

Year	Modeled H1H ¹ 1-Hour NO ₂ Concentration (µg/m ³) ²	MDEQ PM ₁₀ Default Background Concentration (µg/m ³)	Total PM ₁₀ Concentration (µg/m ³)	NAAQS/MAAQS ³ (µg/m ³)	Pass ?	Location		Elevation (m)	Date ⁵
						Easting (m) ⁴	Northing (m)		
2016	262.6	75	337.6	564	Yes	353328.78	4995194.00	1116.16	03082406
2017	259.9	75	334.9	564	Yes	353178.75	4993243.50	1101.01	03070402

¹. H2H = Highest Second High 1-hour modeled NO_x concentration was selected and the Ozone Limiting Method was applied.

². µg/m³ = micrograms per cubic meter.

³. MAAQS = Montana Ambient Air Quality Standard.

⁴. m = meters.

⁵. Date = Year (YY) Month (MM) Day (DD) Hour (HH).

Table 4. Annual NO₂ Modeling Results.

Year	H1H ¹ Annual NO ₂ Concentration (µg/m ³) ²	MDEQ Default NO ₂ Background Concentration (µg/m ³)	Total NO ₂ Concentration (µg/m ³)	NAAQS/MAAQS ³ (µg/m ³)	Pass?	Location		Elevation (m)
						Easting (m) ⁴	Northing (m)	
2016	16.4	6	22.4	100/94	Yes	353128.81	4995192.00	1108.43
2017	10.7	6	16.7	100/94	Yes	351490.19	4993733.00	1143.74

¹. H1H = Highest First High Annual modeled NO_x concentration was selected and the Ambient Ratio Method was applied (modeling results were multiplied by 0.75).

². µg/m³ = micrograms per cubic meter.

³. NAAQS/MAAQS = National Ambient Air Quality Standard/Montana Ambient Air Quality Standard.

⁴. m = meters.

From these results, no violation of the NO₂ NAAQS/MAAQS occurred as a result of the actions associated with MAQP #1120-09.

VII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, the Department conducted the following private property taking and damaging assessment.

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	X	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

Based on this analysis, the Department determined there are no taking or damaging implications associated with this permit action.

VIII. Environmental Assessment

An environmental assessment was not required for the current permit action because it is considered an administrative action.

Permit Analysis prepared by: Shawn Juers
Date: 2/10/2009